

Date: Tuesday, 12/5/2006 8:20:39 AM
 User: Kim Johnston

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services		Drawing Name	: TUBE ASSEMBLY		
Job Number	: 29825					
Estimate Number	: 11198					
P.O. Number	: N/A			Part Number	: D3304041	
This Issue	: 12/5/2006 S.O. No. : N/A			Drawing Number	: D3304 REV. B	
Prsht Rev.	: NC			Project Number	: N/A	
First Issue	: N/A			Drawing Revision	: B	
Previous Run	: 26763 Type : MACHINED PARTS			Material	: N/A	
Written By	:			Due Date	: 12/23/2006	
Checked & Approved By	:			Qty:	4 Um: Each	
Comment	: Est: C 04.11.17 Step 13 revised KJ/JLM					

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :	
1.0	M304TR0875W065	SS TUBING	
		Comment: Qty.: 1.4109 f(s)/Unit Total : 5.6435 f(s) Material: AISI 304/316 SS tubing 0.875" x 0.065" wall (M304TR0.875W.065) Identify for D3304-1 Batch: <i>116258 103090 Bl / DSP 07/01/06</i>	
2.0	HARDINGE	HARDINGE CNC LATHE SMALL	
		Comment: HARDINGE CNC LATHE SMALL Cut blank: 15.75" as per Dwg D3304 Turn as per Folio FA458 and Dwg D3304 Identify as D3304-1	<i>Bl / DSP 07/01/06</i>
3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE	
		Comment: INSPECT PARTS AS THEY COME OFF MACHINE	<i>Bl 07.01.16</i>
4.0	QC8	SECOND CHECK	
		Comment: SECOND CHECK	<i>MS 07/01/16</i>
5.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1	
		Comment: SMALL & MEDIUM FAB RESOURCE 1 Deburr Drill as per Dwg D3304 using drill-Jig D3304-T1 Deburr	<i>FF 07-01-19</i>

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 12/5/2006 8:20:39 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 29825

Part Number: D3304041

Job Number:



Seq. #: Machine Or Operation:

Description :

6.0 QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

11/07/01/22 (4)

7.0 D33045

Bracket



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

Bracket

Pick:

Qty Part Number Description Batch
1 D330475 Bracket B23980

FC 07/03/20 (4)

8.0 LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Weld bracket as per Dwg D3304 and QSI 004

FC 07/03/20 (4)

9.0 QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

M 07/03/20 (4)

10.0 POWDER COATING

POWDER COATING



M101601

(4x)

Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

m-l

07/03/22

11.0 QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT

M 07/03/22 x4

12.0 BLBS0016

PIP PIN



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

PIP PIN

Pick:

Qty Part Number Description Batch
1 BLBS-0016 Pip Pin M16557X3

m16188 x1

m 07/03/22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA:  Date: 07/03/28
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 12/5/2006 8:20:40 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 29825

Part Number: D3304041

Job Number:



Seq. #: Machine Or Operation:

Description :

13.0 CBL460 Loop Sleeve



✓

Comment: Qty.: 2.0000 Each(s)/Unit Total : 8.0000 Each(s)

Loop Sleeve

Pick:

Qty	Part Number	Description	Batch
2	CBL-460	Loop Sleeve	m100644

14.0 CBL1240 Cable



✓

Comment: Qty.: 1.0417 f(s)/Unit Total : 4.1668 f(s)

Cable

Pick:

Qty	Part Number	Description	Batch
12.5"	CBL-1240	Cable	M102439

ml07/03/22

15.0 SMALL FAB 1 SMALL & MEDIUM FAB RESOURCE 1



x4

Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble lanyard and pip pin as per Dwg D3304

ml07/03/26

16.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

ml07/03/26(4)

17.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify with P/N and B/N as per Dwg using a permanent fine point marker, then Stock

Location: _____

16/3/22 (4)

(4)

18.0 QC21 FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

ml07/03/28

Job Completion



U 07/03/28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	29825
Description: Tube Assembly	Part Number:	D3304-1
Inspection Dwg: D3304 Rev: B		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

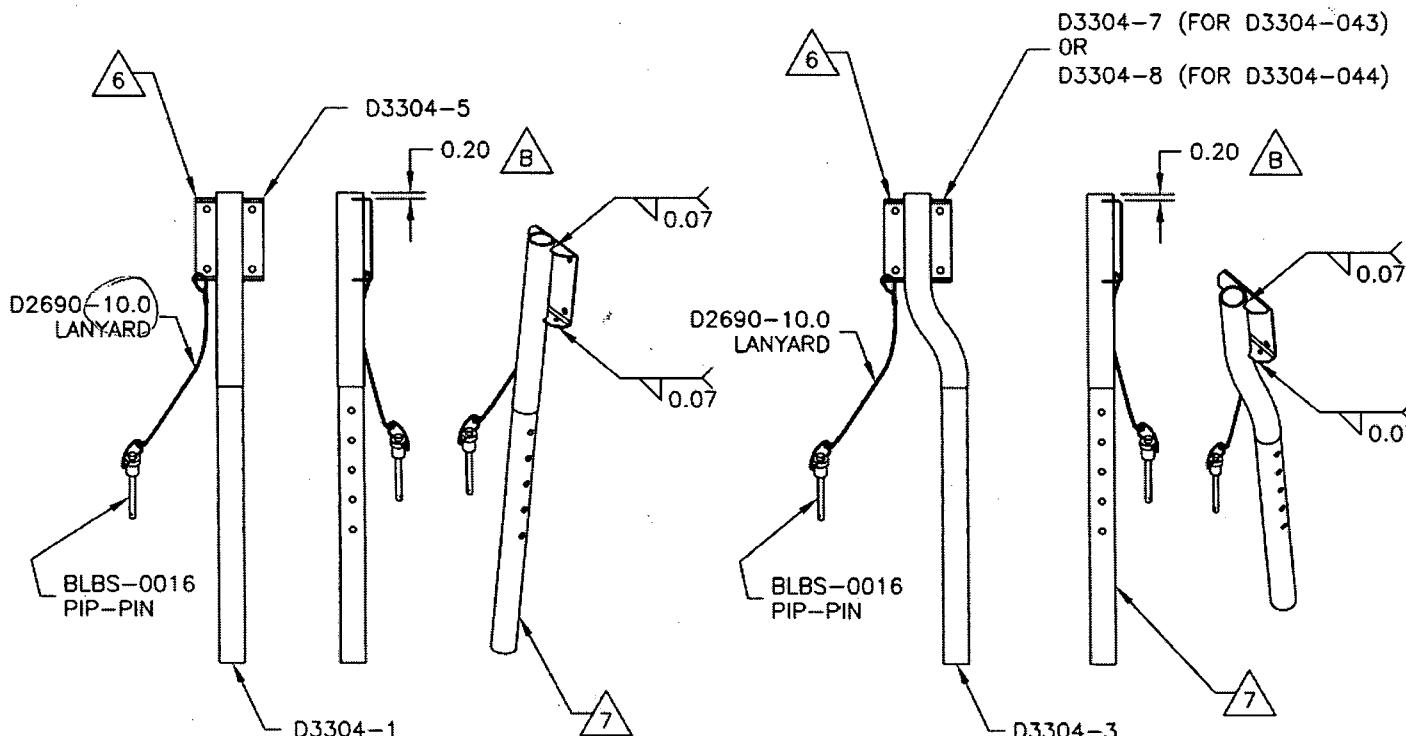
X First Article Prototype

Measured by:	<u>BC</u>	Audited by:	<u>MS</u>	Prototype Approval:	N/A
Date:	07.01.16	Date:	07/01/16	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.09.08	New Issue P/O D3304-041	KJ/JLM	
B	06.03.09	Dwg Rev updated	KJ/JLM	JW

DART

DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD	
CHECKED <i>#</i>	APPROVED <i>#</i>	HAWKESBURY, ONTARIO, CANADA	REV. B
DATE 05.07.15	DRAWING NO. D3304	SHEET 1 OF 4	SCALE 1:6
A 04.08.18	TUBE ASSEMBLY	NEW ISSUE	
B 05.07.15	UPDATE DIMENSIONS; ADD D3304-7/-8		



D3304-044 TUBE ASSEMBLY (SHOWN)
D3304-043 OPPOSITE

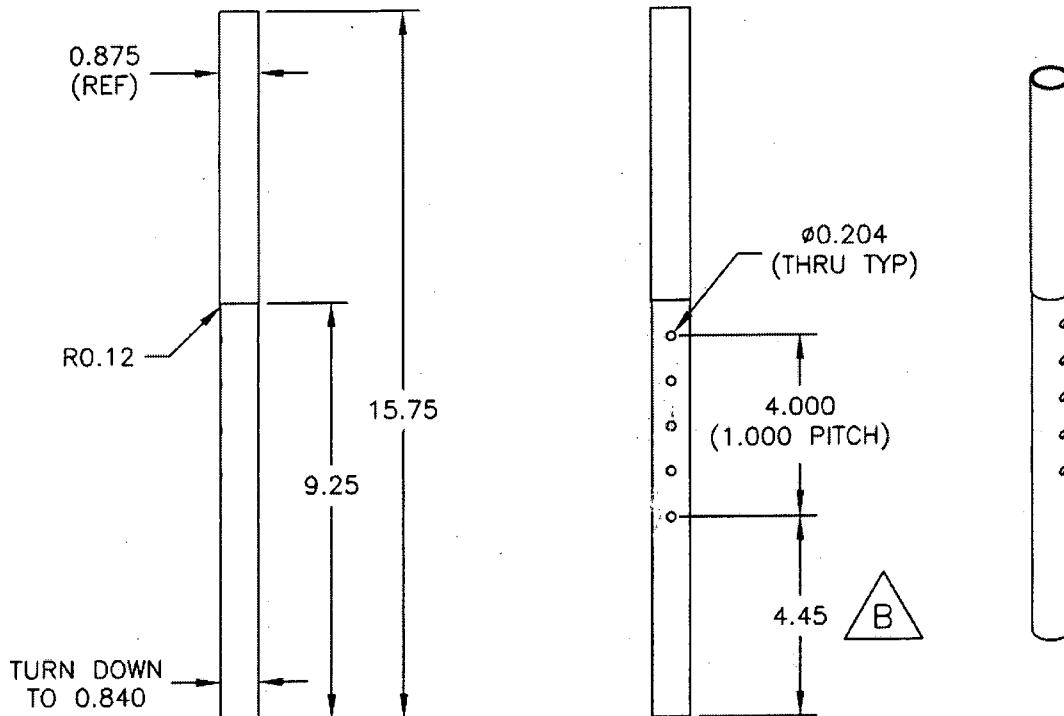
RELEASED
05.08.18
M

- D3304-041/-043/-044 NOTES:**
- 1) FINISH: POWDER COAT GREY SANTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
 - 2) WELD PER DART QSI 004
 - 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) ALL DIMENSIONS ARE IN INCHES
 - 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
 - 6) IDENTIFY AS INDICATED USING FINE POINT PERMANENT INK MARKER "TCCA-PDA, DART AEROSPACE LTD, P/N D3304-XXX B/N BXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"
 - 7) IF BEING ASSEMBLED WITH D3303-041, ADD THE FOLLOWING USING A FINE POINT PERMANENT INK MARKER: "TCCA-PDA, DART AEROSPACE LTD, P/N D412-724-XXX B/N BXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"

UNCONTROLLED COPY
RETURN TO
ENGINEERING
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO 29825

DART

DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[initials]</i>	APPROVED <i>[initials]</i>	DRAWING NO. D3304	REV. B SHEET 2 OF 4
DATE 05.07.15		TITLE TUBE ASSEMBLY	SCALE 1:4

RELEASED
05.08.11 *[initials]***D3304-1 TUBE**

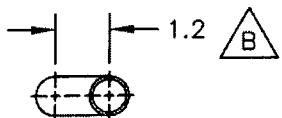
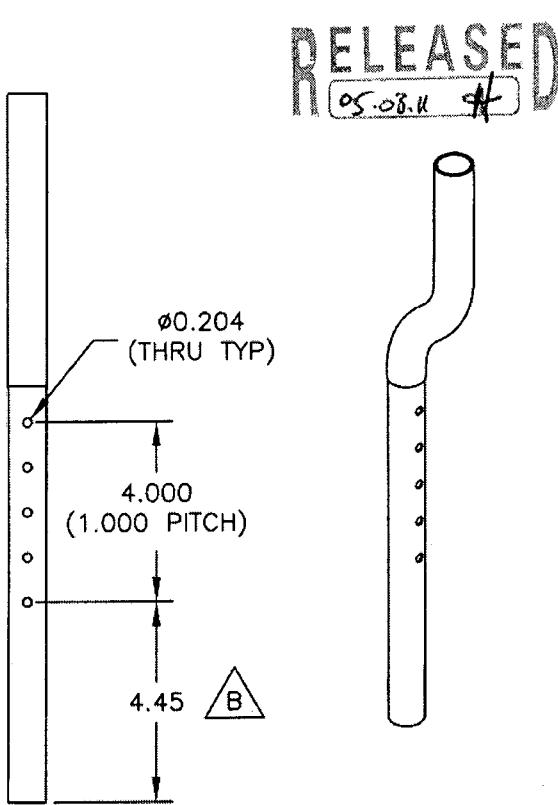
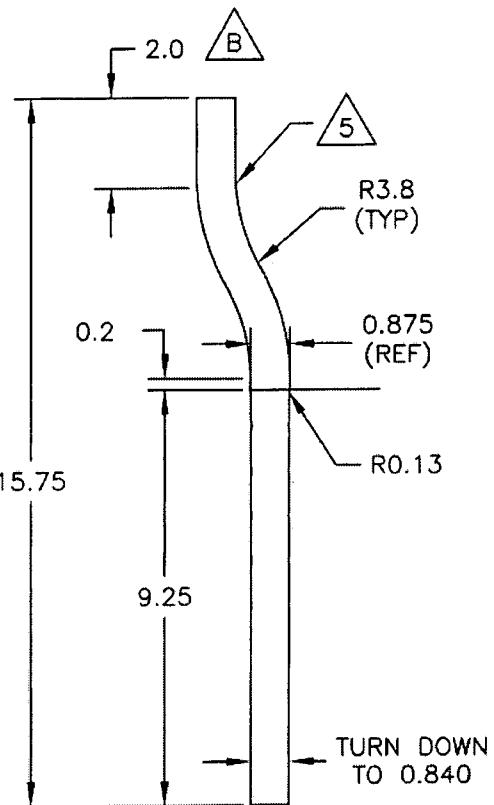
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. *29825*

D3304-1 NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE Ø0.875 x 0.065 WALL
(REF. DART SPEC M304TR0.875W.065) ENSURE SEAMLESS TUBE IS USED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015

DART

DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3304	REV. B SHEET 3 OF 4
DATE 05.07.15		TITLE TUBE ASSEMBLY	SCALE 1:4



D3304-3 TUBE

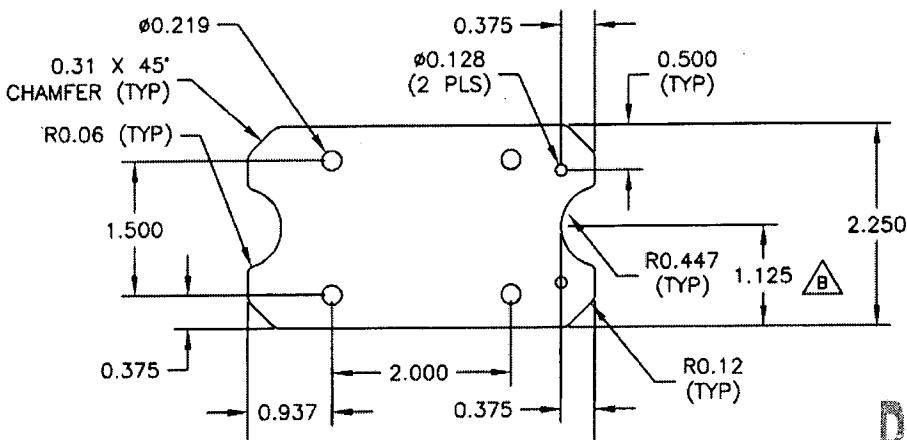
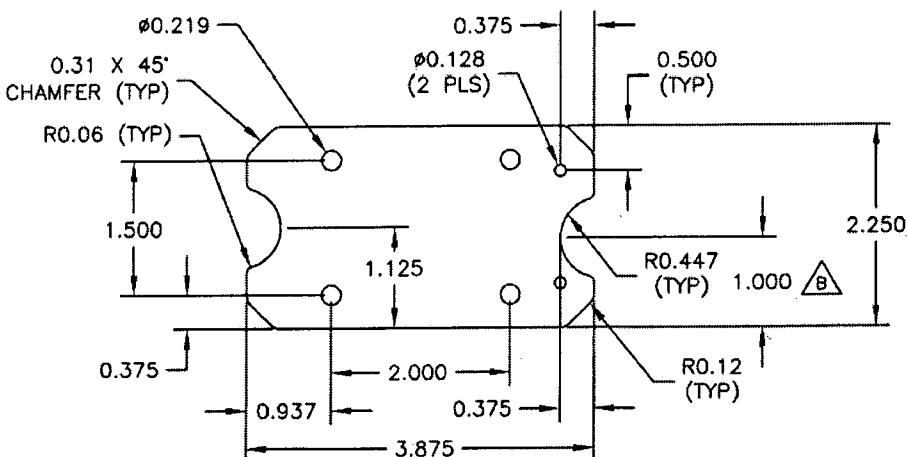
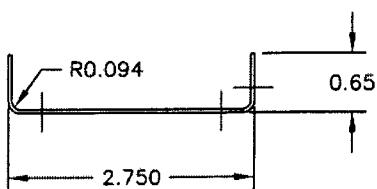
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. *29825*

D3304-3 NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE Ø0.875 x 0.065 WALL (REF. DART SPEC M304TR0.875W.065) ENSURE SEAMLESS TUBE IS USED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) BEND LINES 9.625, 13.375 DIMENSIONS

DART

DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3304	REV. B SHEET 4 OF 4
DATE 05.07.15		TITLE TUBE ASSEMBLY	SCALE 1:2

**RELEASED**
05.07.11**D3304-5 FLAT PATTERN****D3304-7/-8 FLAT PATTERN****D3304-5/-7 BRACKET
D3304-8 OPPOSITE**

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 29825

NOTES:

- 1) MATERIAL: AISI 304/316 SS 0.040 THICK SHEET (REF. DART SPEC M304S20GA)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015